Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A nickel base superalloy consisting of 3.0 to 12 wt% chromium, up to 3.0 wt% molybdenum, 3.0 to 10 wt% tungsten, less than 5.0 wt% rhenium, 6.0 to 12 wt% tantalum, 4.0 to 7.0 wt% aluminum, up to 15 wt% cobalt, up to 0.05 wt% carbon, up to 0.02 wt% boron, up to 0.1 wt% zirconium, up to 0.8 wt% hafnium, up to 2.0 wt% niobium, up to 1.0 wt% vanadium, up to 0.7 wt% titanium, up to 10 wt% of at least one element selected from the group consisting of ruthenium, rhodium, palladium, osmium, iridium, platinum, and mixtures thereof, and the balance essentially nickel, said nickel base superalloy having a microstructure which is pore free and eutectic γ-γ' free.

2. (original) A nickel base superalloy according to claim 1, wherein said microstructure has a gamma prime morphology which includes a bimodal γ' distribution.

3. (previously presented) A nickel base superalloy according to claim 2, wherein said bimodal γ' distribution includes a uniform distribution of large γ' particles in a continuous gamma matrix and a second and uniform distribution of fine γ' particles.

4. (previously presented) A nickel base superalloy consisting of 3.0 to 12 wt% chromium, up to 3.0 wt% molybdenum, 3.0 to 10 wt% tungsten, less than 5.0 wt% rhenium, 6.0 to 12 wt% tantalum, 4.0 to 7.0 wt% aluminum, up to 15 wt% cobalt, up to 0.05 wt% carbon,

up to 0.02 wt% boron, up to 0.1 wt% zirconium, up to 0.8 wt% hafnium, up to 2.0 wt% niobium, up to 1.0 wt% vanadium, up to 0.7 wt% titanium, up to 10 wt% of at least one element selected from the group consisting of ruthenium, rhodium, palladium, osmium, iridium, platinum, and mixtures thereof, and the balance essentially nickel, said nickel base superalloy having a microstructure which is pore free and eutectic γ-γ' free, said microstructure having a gamma prime morphology which includes a bimodal γ' distribution, said bimodal γ' distribution including a uniform distribution of large γ' particles in a continuous gamma matrix and a second and uniform distribution of fine γ' particles, said large γ' particles being octet shaped and having an average particle size in the range of 1.0μ to 20μ and the fine γ' particles being cuboidal particles and having an average particle size in the range of from 0.45μ to 0.55μ.

5. (original) A nickel base superalloy according to claim 1, wherein said nickel base superalloy is a single crystal nickel base superalloy.

6. (previously presented) A single crystal nickel base superalloy having a microstructure which is pore-free and eutectic γ - γ' free and which has a gamma prime morphology which includes a bimodal γ' distribution, the superalloy being capable of resisting initiation and subsequent propagation of fatigue cracks in a hydrogen environment.

7. (original) A single crystal nickel base superalloy according to claim 6, wherein said bimodal γ' distribution includes large γ' particles having a particle size in the range of from 1.0μ to 20μ and fine γ' particles.

8. (original) A single crystal nickel base superalloy according to claim 7, wherein said large γ' particles are present in an amount from 25 vol% to 50 vol%.

9. (original) A single crystal nickel base superalloy according to claim 7, wherein said large γ' particles are present in an amount from 27 vol% to 45 vol%.

10. (previously presented) A single crystal nickel base superalloy having a microstructure which is pore-free and eutectic γ - γ' free and a gamma prime morphology which includes a bimodal γ' distribution having large γ' particles with a particle size in the range of from 1.0μ to 20μ and fine γ' particles, said fine γ' particles having a particle size in the range of from 0.45μ to 0.55μ, the superalloy being capable of resisting initiation and subsequent propagation of fatigue cracks in a hydrogen environment.

11. (previously presented) A single crystal nickel base superalloy according to claim 7, wherein said large γ' particles have an octet shape and said fine γ' particles have cuboidal shape.

12 - 23 (cancelled)

24. (previously presented) An object formed from a single crystal nickel base alloy having a microstructure which is pore-free and eutectic γ-γ' free, and which has a gamma prime morphology with a bimodal γ' distribution, the alloy being

capable of resisting initiation and subsequent propagation of fatigue cracks in a hydrogen environment.

25. (original) An object according to claim 24, wherein the bimodal γ' distribution includes large γ' particles having an average particle size in the range of from 1μ to 20μ and fine γ' particles having an average particle size in the range of from 0.45μ to 0.55μ.

26. (original) An object according to claim 24, wherein said nickel base alloy has a composition comprising 3.0 to 12 wt% chromium, up to 3.0 wt% molybdenum, 3.0 to 10 wt% tungsten, up to 5.0 wt% rhenium, 6.0 to 12 wt% tantalum, 4.0 to 7.0 wt% aluminum, up to 15 wt% cobalt, up to 0.05 wt% carbon, up to 0.02 wt% boron, up to 0.1 wt% zirconium, up to 0.8 wt% hafnium, up to 2.0 wt% niobium, up to 1.0 wt% vanadium, up to 0.7 wt% titanium, up to 10 wt% of at least one element selected from the group consisting of ruthenium, rhodium, palladium, osmium, iridium, platinum, and mixtures thereof, and the balance essentially nickel.

27. (new) A nickel base superalloy consisting of 3.0 to 12 wt% chromium, up to 3.0 wt% molybdenum, 3.0 to 10 wt% tungsten, less than 5.0 wt% rhenium, 6.0 to 12 wt% tantalum, 4.0 to 7.0 wt% aluminum, up to 15 wt% cobalt, up to 0.05 wt% carbon, up to 0.02 wt% boron, up to 0.1 wt% zirconium, up to 0.8 wt% hafnium, up to 2.0 wt% niobium, up to 1.0 wt% vanadium, up to 0.7 wt% titanium, up to 10 wt% of at least one element selected from the group consisting of ruthenium, rhodium, palladium, osmium, iridium, platinum, and mixtures thereof, and the balance essentially nickel, said nickel base superalloy having a microstructure

which is pore free and eutectic γ-γ' free, and said microstructure having a γ matrix phase and containing means for impeding preferential cracking in the γ matrix phase.

28. (new) The nickel base superalloy of claim 27, wherein said impeding means comprises a uniform distribution of octet shaped γ' particles in the γ matrix phase.